North American Drought Monitor– November 2007

CANADA: Drought conditions continue in north central Alberta, and an area bordering Ontario and Quebec. The rest of the country currently has no drought concerns or has had significant improvement in the past moth. Precipitation was varied throughout the country. Precipitation varied through out the country with most regions being below average with the exception of Saskatchewan and Atlantic Canada. The majority of the country saw near normal temperatures with Alberta and Manitoba being the warmest, enjoying between 1-2 degrees Celsius (1.8-3.6 degrees Fahrenheit).

There was improvement in drought conditions throughout the Southern Prairies and British Columbia. The drought extent was reduced significantly due to cool, wet conditions over the past few months. Although the southern portion of Alberta improved, the north central region experienced poor topsoil conditions resulting from less than 10mm (0.4 inch) of precipitation during November and less than 25mm (1 inch) over the last two months. As the ground is frozen, the majority of impacts resulting from lack of precipitation will not be felt until spring. Above average precipitation through out the rest of the winter could quickly make up the October and November shortfall.

Ontario continues to see significant improvements due to considerable precipitation over the last few months. Although parts of northern western Ontario have received up to 200 mm (7.9 inches) during that time, parts of this region are still classified as an abnormally dry due to the long term water deficits, low lake levels and low stream flows. Much of southern Ontario, particularly those areas previously classified as severe to extreme drought, received 75-125mm (3-5 inches), resulting in removal of the D3, extreme drought classification. A region bordering Ontario and Quebec in the north has remained unchanged receiving 94-110mm (3.7 – 4.3 inches) of precipitation being reported over the last 3 months, making it the driest fall on record for this region.

Although a region in New Brunswick, Nova Scotia and Prince Edward Island have received less than normal precipitation over the last few months, all indications are that there are no significant problems. As a result, the drought area previously identified has been removed.

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UNITED STATES: November was a warmer than average month for the western half of the nation. Fourteen states west of the Mississippi River were warmer than average with Arizona having its warmest November on record and California its 11th warmest. Temperatures were near average in the Pacific Northwest and across much of the East. Below average temperatures were widespread in New England. Twenty-eight states from the Southeast to the West Coast were drier than average. In the eastern U.S. only Ohio and four northeastern states (PA, NY, VT, and ME) were wetter than average. Only two other states (AZ and NM) were wetter than average for the month, and much of the precipitation in those states fell on the last day of the month. For the contiguous U.S. as a whole, it was the 13th driest November on record, leading to deterioration of drought conditions from 50.1 percent at the beginning of the month to 56% percent at the end of the month.

During November, a lack of precipitation from the Mid-Atlantic to areas in the Southeast led to an expansion of severe to exceptional drought (D2-D4) conditions. Virginia had its 10th driest November, North Carolina its 9th driest, and South Carolina its 2nd driest November in the 113-year record. For the January-November year-to-date period, North Carolina recorded its driest and the Southeast region as a whole was 3rd driest. At the beginning of December, exceptional drought (D4) covered more than 60% of North Carolina and more than 40% of South Carolina. There was also an expansion of drought in the Deep South. Severe to Exceptional (D2-D4) drought expanded in southwestern Georgia, and southern and western Alabama. Abnormally dry to moderate drought (D0-D1) expanded westward into eastern Mississippi.

Abnormally dry to moderate drought (D0-D1) also developed from the southern Plains and west Texas northward through the western High Plains of Colorado as well as western Arkansas and southern Missouri. The development of abnormally dry conditions in Texas followed an unusually wet spring and summer. The March-August six-month period was the wettest such period for Texas since statewide records began in 1895, but both October and November were drier than average for the state. More than 26 inches of precipitation fell from March through August (11 inches above average). Only 2.5 inches fell in October and November, approximately half the average amount for the state.

Wetter than average conditions during October-November in the northern Rockies led to a reduction in drought severity from southern Idaho to northern Montana as well as eastern Oregon and Washington. There was a one to two-category improvement in many parts of the region, and extreme drought (D3) was absent at the end of November. Rain and snow from southern California to Arizona also led to a reduction in drought severity across a large part of this region (D3 to D2 improvement).

MEXICO: During November, average precipitation at a national level was of 23.9 mm (0.95 in), this means 24% below normal, which for this month is 31.6mm (1.26 in). National meteorological Service (SMN) classified November as the 17th driest month on record for the period 1941-2006.

Precipitation was a result of three tropical waves, transitory low pressure systems, to zones of atmosphere instability, to the influence of humidity from the Pacific Ocean, especially in the northwest of the country, and to the effects of the cold fronts numbers 5 thru 9.

The states that received the most intense precipitation were: Baja California Sur with 285%, Sonora 116.3%, Baja California Norte 55.9%, Chihuahua 45.2%, Veracruz 17.1% and Quintana Roo 3.9%. The rest of the country had precipitation below normal. The states with this condition were: Morelos 93.7%, Guerrero 92%, Colima 86.8%, Nayarit 77.7% Aguascalientes 73.6% Oaxaca 72%, Campeche 56.1 and Chiapas with 62.6%

In the south of the Baja California Peninsula and some regions northwest of Sonora, drought conditions diminished as related to the previous month, nevertheless, a new area classified as (D1) appeared in the south tip of the peninsula.

During the second half of November, a few fires were observed over the north of Baja California, however not as fierce as those in previous months.

D0 areas in the northeast region of Mexico expanded, especially in the states of Coahuila, Nuevo León and Tamaulipas. Drought conditions (D1) continues strong in Chihuahua, Sinaloa, Durango, Nayarit, Zacatecas, Jalisco and Michoacan.

In the southeast of the country, new (D0-D1) areas appeared in the south and to the east of Chiapas, as well as a new (D0) area over Campeche. In the east region of the Yucatan Peninsula, the moderate drought conditions (D0) changed to severe drought conditions (D2).

The National Water Commission reported dam level decreases throughout most of the country. The largest decrease (7.6%) was registered northwest of Mexico.